

REMARKS**Summary of the Office Action**

In the Office Action, the drawings, Abstract and specification are objected to for certain informalities.

Claims 1-9 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification.

Claims 1, 2, 4, 6, 7 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,082,861 to *Dove*, Figure 1 in view of Figure 1.

Claims 3, 5 and 8 would be allowable if rewritten to overcome the § 112, second paragraph rejection.

Summary of the Response to the Office Action

Applicant amends the Abstract, Specification and Drawings in accordance with the Examiner's helpful suggestions. A Submission of Corrected Formal Drawings is being filed concurrently herewith. The drawings incorporate the changes to Figures 6A, 6B, 11 and 12-A-12D which have been labeled as "PRIOR ART".

Applicant respectfully submits that the specification enables one of ordinary skill in the art to make and/or use the invention. Accordingly, claims 1-9 remain pending and are submitted for further consideration.

All Claims are Allowable

The Office Action incorrectly objects to the citation of Japanese Patent Application No. 2001-062115 in paragraph [0001] of the specification. Applicant respectfully submits that the above-mentioned document is not intended for an Information Disclosure Statement, but is a

priority document that was submitted to the U.S. Patent & Trademark Office on March 4, 2002.

Applicant respectfully requests that the Examiner remove his objection to this reference in the specification.

All Subject Matter Complies With 35 U.S.C. § 112, first paragraph

Claims 1-9 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification. Applicant respectfully traverses the rejection for the reasons stated below.

The Examiner is thanked for the helpful comments regarding the subject matter rejection of claims 1-9. Specifically, claims 1, 2, 6, 7, and 9 include a reference to the *Commission Internationale de l'Eclairage*, 1976 u'v' Chromaticity Diagram, hereinafter known as “CIE1976UCS.” The *International Commission on Illumination* or “CIE,” is the primary international organization concerned with color and color measurement. See <http://www.cie.co.at/cie/index.html>. The CIE1976UCS is diagram is used for measuring chroma and can be found at (<http://www.stat.auckland.ac.nz/~ihaka/120/lectures/lecture13.pdf>). Because the claims include this specific 1976 standard, the metes and bounds of the claim are known and will not vary over time. Accordingly, it is respectfully submitted that the claims are definite. Further, one of ordinary skill in the art would know that the claimed feature refers to chromaticity values (as measured by CIE1976UCS) at all the measurement locations (1-13) being within a claimed range (distance) from the chromaticity value measured at the central position (5). Accordingly, withdrawal of the rejections under 35 U.S.C. § 112, first paragraph, is respectfully requested.

All Subject Matter Complies With 35 U.S.C. § 103(a)

Claims 1, 2, 4, 6, 7 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,082,861 to *Dove et al.*, Figure 7 in view of Figure 1. This rejection is respectfully traversed for at least the following reasons.

Applicant respectfully submits that independent claims 1 and 9 include features not found or taught in *Dove et al.* Specifically, independent claims 1 and 9 recite a combination of features including at least an “image signal generated in each of said reflection type light valves . . . [if it] indicates black, said color synthesizing optical system and each of said light valve are positioned so that coordinates in CIE1976UCS chromaticity diagram [] show a color . . . within a distance equal to or less than 0.09 from coordinates in the chromaticity diagram that show a color at the center of said light valve.” At least these features are not taught or suggested by *Dove et al.*

Dove et al. discloses an optical system for a projection display including beam splitters 702, reflective light valves 710, and phase correcting plates 712. See e.g., column 10, lines 18-28 and Fig. 7 of *Dove et al.* *Dove et al.* discloses using phase correcting plates 712 to improve the contrast ratio of the projected image. The phase correcting plates 712 are located between the beam splitters 702 and the reflective light valves 710. See Fig. 7 of *Dove et al.*

Notably, *Dove et al.* does not teach an optical system where an “image signal generated in each of said reflection type light valves . . . indicates black, said color synthesizing optical system and each of said light valve are positioned so that coordinates in CIE1976UCS chromaticity diagram [] show a color . . . within a distance equal to or less than 0.09 from coordinates in the chromaticity diagram that show a color at the center of said light valve,” as

recited in claims 1 and 9. *Dove et al.* teaches correcting the “black state” and improving contrast by inserting a phase correcting plate 712 between the beam splitters 702 and reflective light valves 710. See column 4, line 32-63 of *Dove et al.*.

Applicant respectfully submits that claims 1 and 9 include features that are neither taught nor suggested by *Dove et al.* The present invention claims the contrast across the projected image will be “equal to or less than 0.09” from the chromaticity coordinates of the central region. *Dove et al.* does not teach and makes no statement regarding uniformity of coloration across its projected image.

Further, *Dove et al.* does not render the present invention obvious because it teaches away from the present invention. *Dove et al.* shows, in Fig. 7, that the apex of the acute angle of prism 704 is directly opposed to the beam splitter 702. Light passing through this part of the prism passes through a portion at which the largest stress is generated in the prism. See Fig. 13 of the specification. The stress causes deficiencies in contrast. See the specification at page 8, lines 1-16. In contrast, the present invention avoids passing light through this part of the prism in order to avoid the subsequent deficiencies in contrast. See the specification at page 32, lines 3-24 and Fig. 7A.

Even if the statement in the Office Action that it is “implied” that the elements in Fig. 7 could replace elements in Fig. 1, were true, such interchangeability would not render obvious the present invention. Applicant respectfully submits, therefore, that the combination of features including at least an “image signal . . . indicates black, said color synthesizing optical system and each of said light valve are positioned so that coordinates in CIE1976UCS chromaticity diagram [] show a color . . . within a distance equal to or less than 0.09 from coordinates in the

chromaticity diagram that show a color at the center of said light valve," as recited in claims 1 and 9 cannot be taught or suggested by *Dove et al.*

As pointed out in MPEP § 2143.03, "[t]o establish prima facie obviousness of a claimed invention, all the claimed limitations must be taught or suggested by the prior art". *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974). Therefore, Applicant respectfully asserts that the rejections under § 103(a) should be withdrawn because *Dove et al.* does not teach or suggest each feature of independent claims 1 and 9. Additionally, it is further respectfully submitted that dependent claims 2-8 are also allowable insofar as they recite the patentable combinations of features recited in independent claim 1, as well as reciting additional features that further distinguish over the applied art. Accordingly, withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicant's undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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